

THERMOPLASTIC HEAT EXCHANGER

ABSTRACT OF THE DISCLOSURE

A heat exchanger that includes a base member (1) and at least one plastic sheet (3 and/or 3') thereover is described. More particularly, the heat exchanger includes: a base member (1) of thermoplastics material having a channel (7, 7') in its upper (23) and/or lower (23) surfaces; and upper (3) and/or lower (3') plastic sheets, having channels therein (8, 8'), superposed over the upper and/or lower surfaces of base member (1). The channels (7, 7') of the base member (1) and the channels (8, 8') of the plastic sheets (3, 3') together define upper (6) and/or lower (6') conduits in the heat exchanger. The upper and lower conduits (6 and 6') in combination with an optional aperture (10) in the base member (1), may together form a continuous conduit (20). The heat exchanger also includes an inlet pipe (4) and an outlet pipe (9) which provide an inlet and an outlet for a heat transfer medium to pass through the upper and/or lower conduits (6, 6'). Also described is a method of forming the heat exchanger which involves laser welding the upper and/or lower plastic sheets to the base member.

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